

CLAIMS

1. A filter construction comprising a filter element comprising two  
pleated filter cloths (10, 11) mounted so that their folds are  
5 oppositely directed to form a series of lozenge-sectioned filtration  
chambers (12) characterised in that the end edges (15) of the filter  
cloths (10, 11) are clamped in an edge strip (16) at each end.
2. A filter construction according to claim 1, characterised in that said  
10 pleated filter cloths (10, 11) are also secured at top and bottom to  
top and bottom frame members (13, 14).
3. A filter construction according to claim 2, characterised in that the  
top and bottom edges of side pleated filter cloths are encapsulated  
15 into moulded top and bottom frame members (23).
4. A filter construction according to claim 1, characterised in that the  
edge strips (16) are formed as mouldings which provide rigid side  
elements, and in that said side elements are reinforced by  
20 reinforcing members (22, 26), and in that the edge strips (16) are  
wider than the pleats formed in the filter cloths.
5. A filter construction according to claim 4 characterised in that the  
reinforcing members (22, 26) comprise rods or profiles made from  
25 glass, carbon or synthetic fibre reinforced plastics.

6. A filter construction according to claim 4, characterised in that the reinforcing members comprise fibres, braid or other textiles of glass, carbon or synthetic material.
- 5 7. A filter construction according to claim 1 characterised in that the edge strips (20) each comprise a generally tubular member having a longitudinal slot (28) in one wall thereof into which the end edges of the filter cloths (31, 32) are inserted, and retained by a clamping member (33).
- 10 8. A filter construction according to claim 7, characterised in that the clamping member (33) comprises a u-sectioned strip which has one or more surfaces which press the end edges of the filter cloths against the inner face of said slotted wall, and opposed surfaces which bear on the opposed wall of the strip (20).
- 15 9. A filter construction according to claim 7 characterised in that the clamping member is provided by an indented part (68) of the opposed side wall (62) which is disposed to press the edge regions of the filter cloths against the inner surface of the slotted side wall (61) of the strip (60).
- 20 10. A filter construction according to claim 7 wherein the edge strip (20) is of a generally elliptical cross-section.
- 25 11. A filter construction according to claim 8 wherein the edge strip (40) or (45) is of a generally rectangular cross-section.

12. A filter construction according to claim 8 wherein the edge strip (50) provides a curved slotted wall (54) with flanges extending beyond a generally trapezoidal sectioned part.
- 5 13. A filter construction according to claim 9, wherein the edge strip (60) is of a waisted oval shape, with opposed faces indented to define a two-lobed cross-sectional shape.
- 10 14. A filter construction according to any preceding claim, wherein the edge strips are of polyurethane resin, comprising a two-part thermo-setting preparation which sets within 20 minutes of mixing.
- 15 15. A filter construction according to claim 4 wherein the edge strips (16) are formed to be complementary so that a plurality of elements can be connected together side to side.
- 20 16. A filter construction according to claim 15, characterised in that one such edge strip (17) is formed with two ribs (23, 24) which leave a channel therebetween, and a complementary edge strip (16) is formed with a single rib (22) which is dimensioned and shaped so as to fit into the channel.
- 25 17. A filter construction according to claim 16 wherein similar interconnectable parts are provided on the top and bottom frame members (23).